

Appl. No. 10/708,061
Amdt. dated April 29, 2005
Reply to Office action of February 07, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

5 Claim 1 (Currently Amended): A projecting system for projecting an image onto a screen comprising:
 a projector comprising:
 a light source;
 a beam splitter installed on a side of the light source, for splitting a beam
10 generated by the light source into a visible beam and an invisible beam;
 a first image-forming device for modulating the invisible beam to form a first image;
 a second image-forming device for modulating the visible beam to form a second image having at least one cursor; and
15 a prism for projecting the first image and the second image onto the screen;
 and
 an a movable image-capturing device for capturing a part of the first image, the image-capturing device having
20 an output unit for outputting the first image captured by the image-capturing device, wherein the output unit outputs a first part of the first image at a first time, outputs a second part of the first image at a second time; and
 a data processor for receiving data from the output unit and changing the position of the cursor according to the first part and the second part of
25 the first image.

Claim 2 (Original): The projecting system of claim 1 wherein the first image is a square

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matrix.

Claim 3 (Original): The projecting system of claim 1 wherein the data processor is connected to the projector through a transmission line.

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Claim 4 (Original): The projecting system of claim 1 wherein the data processor is connected to the projector wirelessly.

10 Claim 5 (Original): The projecting system of claim 1 wherein the data processor calculates a moving distance for the cursor according to a difference between the first part and the second part of the first image.

15 Claim 6 (Original): The projecting system of claim 5 wherein the projecting system further comprises a computer, and the data processor is installed inside the computer for calculating the moving distance of the cursor.

20 Claim 7 (Original): The projecting system of claim 6 wherein the output unit of the image-capturing device transmits the first part and the second part of the first image to the data processor through a transmission line.

Claim 8 (Original): The projecting system of claim 6 wherein the output unit of the image-capturing device transmits the first part and the second part of the first image to the data processor wirelessly.

25 Claim 9 (Original): The projecting system of claim 1 wherein the image-capturing device further comprises a processing unit for calculating a difference between the first part and the second part of the first image so as to calculate a moving distance for the cursor.

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Claim 10 (Original): The projecting system of claim 9 wherein the projecting system is cooperated with a computer, and the image-capturing device further comprises a data transmitter for transmitting the moving distance of the cursor.

5 **Claim 11 (Original):** The projecting system of claim 1 wherein the first image-forming device and the second image-forming device are liquid crystal displays (LCD).

10 **Claim 12 (Original):** The projecting system of claim 1 wherein the first image-forming device and the second image-forming device are digital micromirror devices (DMD).

15 **Claim 13 (Currently Amended):** The projecting system of claim 1 wherein the image-capturing photosensing device is a charge coupled device (CCD).

20 **Claim 14 (New):** A method for controlling position of a cursor projected onto a screen in a projection system, the projection system comprising:

a projector comprising:

a light source;

25 a beam splitter installed on a side of the light source, for splitting a beam generated by the light source into a visible beam and an invisible beam;

a first image-forming device for modulating the invisible beam to form a first image;

25 a second image-forming device for modulating the visible beam to form a second image comprising the cursor; and

a prism for projecting the first image and the second image onto the screen; and

30 a movable image-capturing device for capturing a part of the first image;

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the method comprising:

the image-capturing device capturing a first part of the first image;
moving the image-capturing device;
the image-capturing device capturing a second part of the first image; and
changing the position of the cursor according to differences between the first
part and the second part of the first image.

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Claim 15 (New): The method of claim 14 further comprising the image-capturing device transmitting the first and parts of the first image to a data processor, the data processor calculating a new position of the cursor according to differences between the first part and the second part of the first image.

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Claim 16 (New): The method of claim 15 further comprising the image-capturing device wirelessly transmitting the first part and the second part of the first image to the data processor.

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Claim 17 (New): The method of claim 15 further comprising the data processor transmitting the new position of the cursor to the projector

20 Claim 18 (New): The method of claim 15 further comprising the data processor wirelessly transmitting the new position of the cursor to the projector